MONARDA LINDHEIMERI (LAMIACEAE): NEW TO ARKANSAS

Walter C. Holmes
Department of Biology
Baylor University
Waco, Texas 76798-7388 U.S.A.
walter_holmes@baylor.edu

Jason R. Singhurst
Wildlife Diversity Program
Texas Parks and Wildlife Department
3000 South IH-35, Suite 100
Austin, Texas 78704 U.S.A.
jason.singhurst@tpwd.state.tx.us

ABSTRACT

Monarda lindheimeri is reported as new to Arkansas. The overall distribution of the species in Louisiana and Texas and a comparison with a similar species are also discussed.

RESUMEN

Se cita como nueva para Arkansas *Monarda lindheimeri*. También se comenta la distribución total de la especie en Louisiana y Texas, y una comparación con una especie semejante.

Monarda lindheimeri Engelm. & A. Gray ex A. Gray occurs mainly in east Texas, where Turner et al. (2003) mapped it in 15 counties (Anderson, Brazos, Cass, Fannin, Galveston, Gonzales, Grayson, Grimes, Harris, Harrison, Montgomery, Morris, Walker, Waller, and Upshur). Additional Texas records include Colorado (*Brown 7472*, SBSC), Hardin (*Singhurst 2161*, BAYLU), Liberty (*Brown 15414*, SBSC), Madison (*Neill 1732*, TAMU), Marion (*Holmes 9967 & Singhurst*, BAYLU), and San Jacinto (*Brown 7566*, SBSC) counties. The few scattered records from Louisiana include Calcasieu Parish (Correll & Correll 1941), St. Landry Parish (McClintock & Epling 1942), Acadia and Jefferson Davis parishes (Thomas & Allen 1998), and Rapides Parish (Camp Beauregard, *Leonard 1560,* US!, determined and annotated by R. Scora).

The species is characterized by its single, terminal flower cluster (glomerule) composed of white flowers. The stamens are exserted beyond the upper lip of the corolla. Plants are more or less unbranched above and have midstem petioles 3–7 mm long or longer (~ 9 mm) if spreading pilose hairs are present. Although closely related to *Monarda fistulosa* L. var. *mollis* (L.) Benth., *M. lindheimeri* has been maintained as distinct by McClintock and Eppling (1942), Scora (1967), and Turner (1994, 2003). The cited variety of *M. fistulosa* may be distinguished from *M. lindheimeri* by being branched above, thus having several glomerules in a loose corymb, has flowers that are more pinkish to lavender, but occasionally white with a pinkish tint, and its midstem petioles are 8 mm or greater in length and are never spreading pilose.

Based upon the specimens cited below, we report the occurrence of *Monarda lindheimeri* in Arkansas.

Specimens: **ARKANSAS. Miller Co.:** County Road 32, 0.1 mi E of jct. with County Road 107 near Brightstar, 24 May 2006, *Holmes 13620 & Singhurst* (BAYLU); County Road 107, 0.7 mi S of jct. with AR Hwy 160 near Brightstar, 24 May 2006, *Holmes 13628 & Singhurst* (BAYLU).

Three populations of *Monarda lindheimeri* were found growing in red clay soils on exposed iron ore ridges on the Weches Geologic Formation (University of Texas Bureau of Economic Geology 1979). The first population mentioned above consisted of 55 genets, while the second population included 20 genets. Specimens were not collected from the third population, which was located about 200 m west from the first collection mentioned above. This population was comprised of 37 genets. Characteristic vegetation included *Pinus elliottii, Quercus marilandica*, *Q. stellata*, *Liquidambar styraciflua, Diospyros virginiana*, *Juniperus virginiana*, *Viburnum rufidulum*, *Vaccinium arboreum*, *Rhus copallina*, *Aesculus pavia*, *Berchemia scandens*, *Toxicodendron radicans*, *Schizachyrium scoparium*, *Panicum sphaerocarpon*, *Symphyotrichum patens*, *Hypericum punctatum*, *Helianthus hirsuta*, *Liatris elegans*, *Vernonia missurica*, *Stylosanthes biflora*, *Hypochaeris hirsuta*, *Lechea tenuifolia*, *Ascyrum hypericoides*, *Tephrosia virginiana*, *Echinacea angustifolia*, *Plantago aristata*, and *Ruellia humilis.*

J. Bot. Res. Inst. Texas 1(1): 717 – 718. 2007

ACKNOWLEDGMENTS

We thank the herbaria (DUKE, SBSC, TAES, TAMU, TEX/LL, and US) whose specimens, in part, made this study possible. Special thanks are due Gina Gollub, a student and herbarium worker at BAYLU, who assisted with preparation of the manuscript. Staria Vanderpool and an anonymous reviewer provided helpful comments.

REFERENCES

Correll, D.S. and H.B. Correll. 1941. A collection of plants from Louisiana. Amer. Midland Naturalist 26:30–64.

McClintock, E. and C. Epling. 1942. A review of the genus *Monarda*. Univ. Calif. Publ. Bot. 20:147–194.

Scora, R. 1967. Interspecific relationships in the genus of *Monarda* (Labiatae). Univ. Calif. Publ. Bot. 41:1–71.

Thomas, R.D. and C.M. Allen. 1998. Atlas of the vascular flora of Louisiana. Vol. 3: dicotyledons. Fabaceae–Zygophyllaceae. Louisiana Department of Wildlife & Fisheries, Baton Rouge.

Turner, B.L. 1993. Taxonomic treatment of *Monarda* (Lamiaceae) for Texas and Mexico. Phytologia 77:56–79.

Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. Atlas of the vascular plants of Texas. Vol. 1. Sida Bot. Misc. 24. Botanical Research Institute of Texas, Fort Worth.

University of Texas Bureau of Economic Geology. 1979. Texarkana map. University of Texas, Austin.